

WHAT IS CLAIMED IS:

1 ~~1. A videophone system, comprising:~~
2 ~~a cable television system headend;~~
3 ~~a plurality of subscriber terminals connected to said headend via a~~
4 ~~transmission medium;~~
5 ~~a videophone unit connected to at least one of said plurality of subscriber~~
6 ~~terminals;~~
7 ~~a camera associated with each said videophone unit, said camera being~~
8 ~~adapted to capture video images for transmission via said videophone unit; and~~
9 ~~at least one display device associated with each videophone unit;~~
10 ~~wherein said videophone unit is adapted to transmit and receive~~
11 ~~videophone signals over said transmission medium of said cable television system.~~

1 2. The videophone system of Claim 1, wherein said transmission medium
2 comprises hybrid fiber coax.

1 ~~3. The videophone system of Claim 2, wherein said camera is a digital video~~
2 ~~camera.~~

1 4. The videophone system of Claim 1, wherein said videophone unit further
2 comprises:
3 a processor ^A for encoding videophone data to be transmitted and for
4 decoding received videophone signals.

1 5. The videophone system of Claim 4, wherein said videophone unit further
2 comprises an encoder for providing display signals to said display.

1 6. The videophone system of Claim 5, wherein said encoder comprises an
2 analog television signal encoder.

1 7. The videophone system of Claim 5, wherein said encoder comprises a
2 digital television compositor/display

1 8. The videophone system of Claim 1, wherein said subscriber terminal is
2 capable of being configured to operate as a cable modem.

1 9. The videophone system of Claim 1, wherein said subscriber terminal
2 comprises a cable modem.

1 10. The videophone system of Claim 1, further comprising a graphical user
2 interface operable via a remote control for enabling a user of said videophone system to
3 place and receive videophone calls.

1 11. The videophone system of Claim 1, wherein said headend is coupled to a
2 second headend via a high-speed long distance network to enable videophone signals to
3 be transported between two different cable television systems.

1 12. The videophone system of Claim 1, wherein a plurality of videophone units
2 are connected to one subscriber terminal.

1 13. The videophone system of Claim 1, wherein said videophone unit is
2 connected said subscriber terminal by at least one interface selected from the group
3 comprising: ethernet, wireless ethernet, firewire, universal serial bus, PCI and PCMCIA.

1 14. The videophone system of Claim 12, wherein said plurality of videophones
2 are connected to said one subscriber terminal via a local area network.

1 15. ~~The videophone system of Claim 11, wherein said long distance network~~
2 ~~includes at least one of a satellite network and a terrestrial network.~~

1 16. ~~The videophone system of Claim 1, wherein said headend is adapted to~~
2 ~~convert videophone signals from one predetermined format to a second predetermined~~
3 ~~format based on a format of a videophone signal receiving unit, wherein a transmitting~~
4 ~~videophone unit transmits videophone signals in a format different from a format of said~~
5 ~~videophone signal receiving unit.~~

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1 17. A cable television system adapted to provide transport of videophone
2 signals, comprising:
3 a cable television system headend;
4 a plurality of hubs operatively coupled to said headend; and
5 a plurality of nodes operatively coupled to said hubs and operatively
6 coupled to a plurality of videophones via a subscriber terminal, said subscriber terminal
7 and videophone being operatively coupled to a display device, wherein videophone signals
8 are transported over the cable television system.

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1 18. The cable television system of Claim 17, wherein said headend comprises:
2 a backbone switch;
3 a router, an application server, a receiver, a gateway and a network
4 controller, each operatively connected to said backbone switch; and
5 a modulator connected to said gateway.

1 19. The cable television system of Claim 18, wherein each of said hubs
2 comprise:
3 an interface device coupled to the backbone switch of said headend;
4 a gateway and a modulator operatively coupled to said interface; and

1 a demodulator coupled to said modulator and said plurality of nodes.

1 ~~20. The cable television system of Claim 17, wherein said subscriber terminal~~
2 ~~comprises a cable modem.~~

1 ~~21. The cable television system of Claim 20, wherein a plurality of videophones~~
2 ~~are connected to a single cable modem via a local area network.~~

1 22. The cable television system of Claim 17, wherein said subscriber terminal
2 is capable of being configured to operate as a cable modem.

1 ~~23. The cable television system of Claim 17, wherein said headend is in~~
2 ~~communication with at least one-second headend via a long distance network, thereby~~
3 ~~enabling transport of videophone signals between separate cable television systems.~~

1 24. The cable television system of Claim 19, wherein said interface device
2 comprises a local area network interface.

1 25. The cable television system of Claim 17, wherein said cable television
2 system includes a transmission medium comprising hybrid fiber coax.

1 ~~26. The cable television system of Claim 17, wherein said videophone further~~
2 ~~comprises a digital camera for capturing video images to be transmitted.~~

1 27. The cable television system of Claim 17, wherein said videophone is
2 integrated into said subscriber terminal.

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1 28. The cable television system of Claim 17, wherein said subscriber terminal.
2 is interfaced to at least one videophone by at least one interface of the group comprising:
3 ethernet, wireless ethernet, firewire, universal serial bus and PCMCIA.

1 29. A method for transporting videophone signals over a cable television
2 network comprising the steps of:
3 creating a videophone signal;
4 encoding said videophone signal;
5 transmitting the encoded videophone signal to a predetermined receiver
6 over said cable television network;
7 receiving the transmitted videophone signal at said predetermined receiver;
8 decoding the received videophone signal; and
9 displaying the decoded videophone signal on a display device.

1 30. The method of Claim 29, further comprising the step of:
2 converting said encoded videophone signal at a headend of said cable
3 television network to provide a converted videophone signal that is compatible with
4 devices connected to said cable television network or to devices of a second cable
5 television network.

1 31. The method of Claim 29, wherein said transmitted videophone signals are
2 further transmitted to a receiver coupled to a second cable television network via a
3 headend of the cable television network over a long distance data network.

1 32. The method of Claim 29, wherein said received videophone signal is
2 received by a videophone device coupled to a second cable television network.

1 33. The method of Claim 29, wherein said videophone signal is encoded with
2 a destination address identifying an intended receiver of said videophone signal.

1 34. The method of Claim 33, wherein said destination address comprises an
2 IP address.

1 35. The method of Claim 29, wherein the steps of creating, transmitting and
2 receiving said videophone signal include using a graphical user interface.

1 36. The method of Claim 29, wherein the step of creating said videophone
2 signal comprises: capturing an image via a digital camera.

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